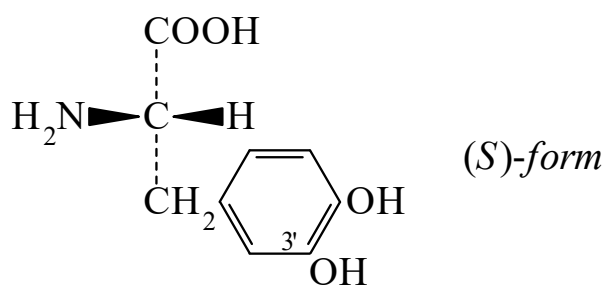




>>Entry Name: 2-Amino-3-(3,4-dihydroxyphenyl)propanoic acid

Synonym(s): 3-Hydroxytyrosine, 9Cl. 3,4-Dihydroxyphenylalanine. DOPA



CAS Registry Number: 587-45-1

Related CAS Registry Numbers(s): 57308-51-7 127441-81-0

Molecular Formula: C₉H₁₁NO₄

Molecular Weight: 197.19

Accurate Mass: 197.068809

Percentage Composition: C 54.82%; H 5.62%; N 7.10%; O 32.45%

Biological Use/Importance: Used in treatment of the Parkinsonian syndrome. The immediate precursor of the neurotransmitter dopamine. Usually administered with a peripheral DOPA decarboxylase inhibitor

Calculated Log P Data: Log P -2.82 (uncertain value) (calc)

>>Variant: (R)-form

Synonym(s): D-form

CAS Registry Number: 5796-17-8

Molecular Formula: C₉H₁₁NO₄

Molecular Weight: 197.19

Accurate Mass: 197.068809

Percentage Composition: C 54.82%; H 5.62%; N 7.10%; O 32.45%

Physical Description: Prisms (H₂SO₃ aq.)

Melting Point: Mp 282°

Optical Rotation: [α]_D +11.9

Sigma: D9661

>>Variant: (S)-form

Synonym(s): L-form. **Levodopa**, BAN, INN, JAN, USAN. Bendopa. Brocadopa. Dopar. Larodopa. Levopa. Veldopa. Many other names

CAS Registry Number: 59-92-7

Molecular Formula: C₉H₁₁NO₄

Molecular Weight: 197.19

Accurate Mass: 197.068809

Percentage Composition: C 54.82%; H 5.62%; N 7.10%; O 32.45%

Source/Synthesis: Occurs in seedlings and pods of *Vicia faba*, in *Mucuna pruriens*, *Sarothamnus scoparius*, *Stizolobium deeringianum*, *Stizolobium hassjoo*, *Aristolochia clematidis* and other plants. Also prod. by *Bacillus* spp.

Physical Description: Prisms, needles (H₂O + SO₂) or plates (EtOH aq.)

Melting Point: Mp 285.5 dec.°

Optical Rotation: [α]_D²⁰ -12.15 (c, 4 in 1N HCl)

Other Data: Pharmacol. active isomer. Rapidly turns green in air, aq. solns. darken in air. Green col. with FeCl₃. Reduces AgNO₃, NH₃ and acid KMnO₄. Component of Sinemet. High-mol.-wt. polymers have been synth.

Hazard & Toxicity: Systemic (e.g. CNS) and adverse effects when used therapeutically. LD₅₀ (rat, orl) 1780 mg/kg. Exp. reprod. and teratogenic effects

Aldrich: 15431-8

Fluka: 37830

Sigma: D9628

>>Derivative: Hydrochloride

CAS Registry Number: 5796-14-5

Physical Description: Prisms

Melting Point: Mp 209°